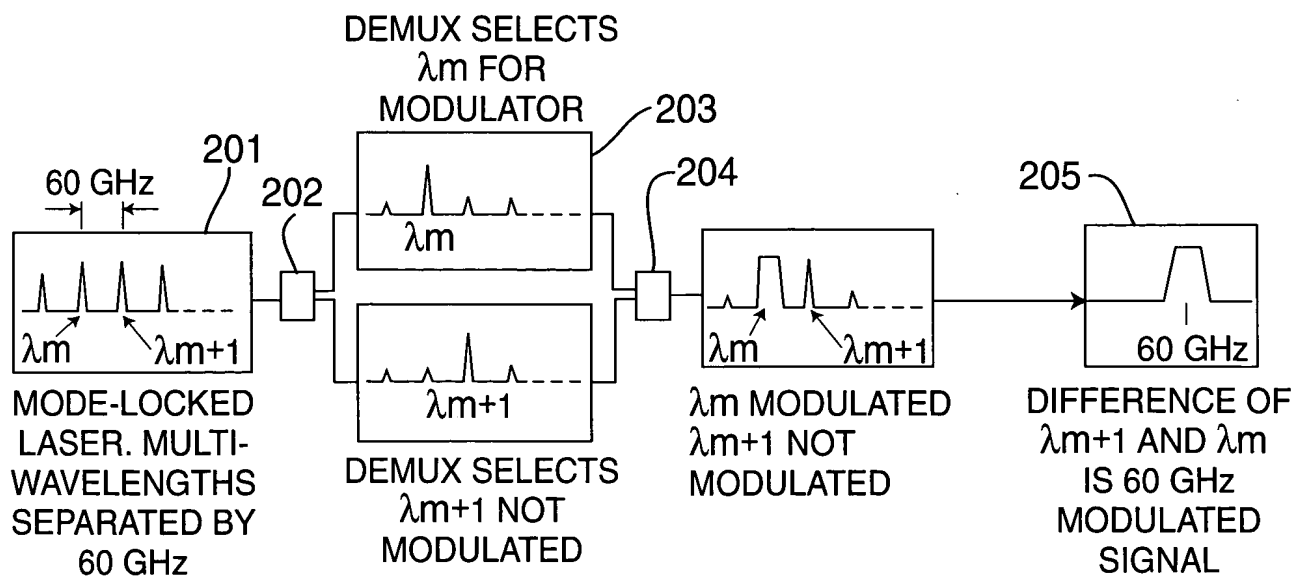
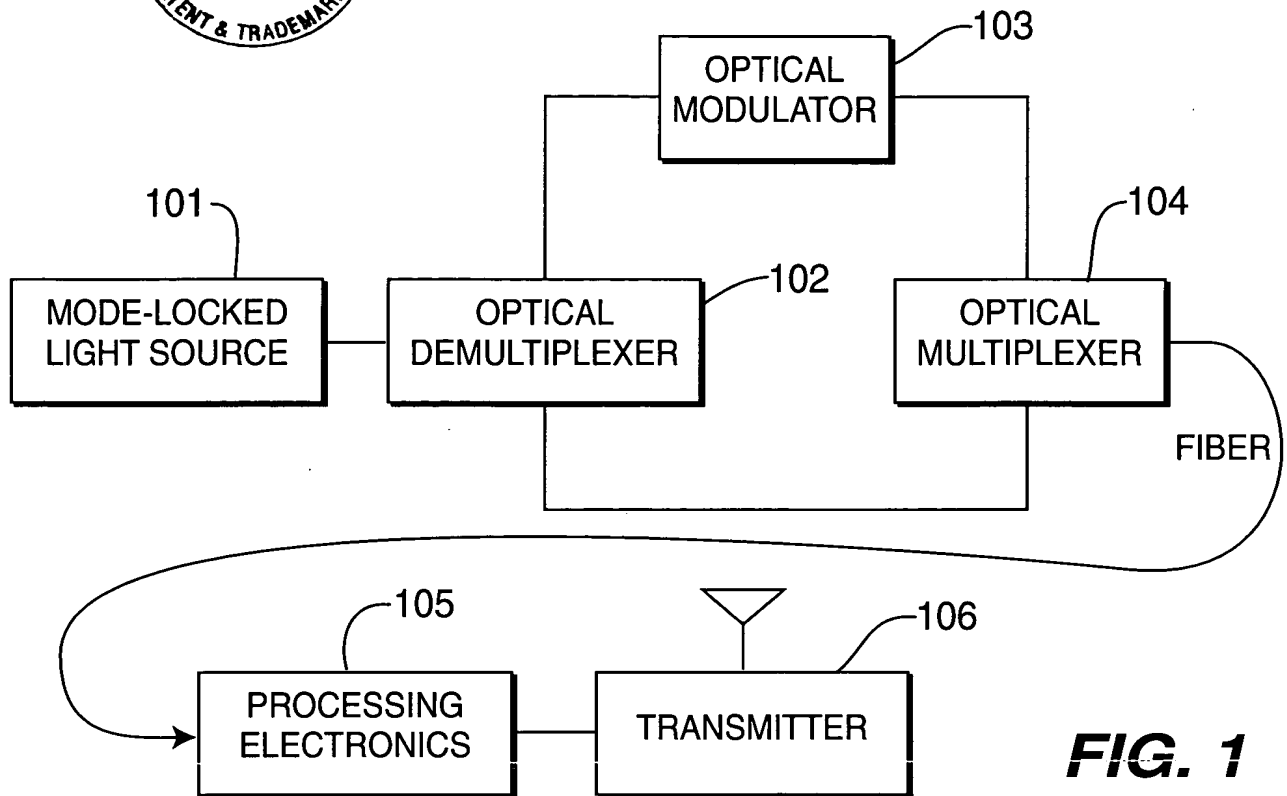


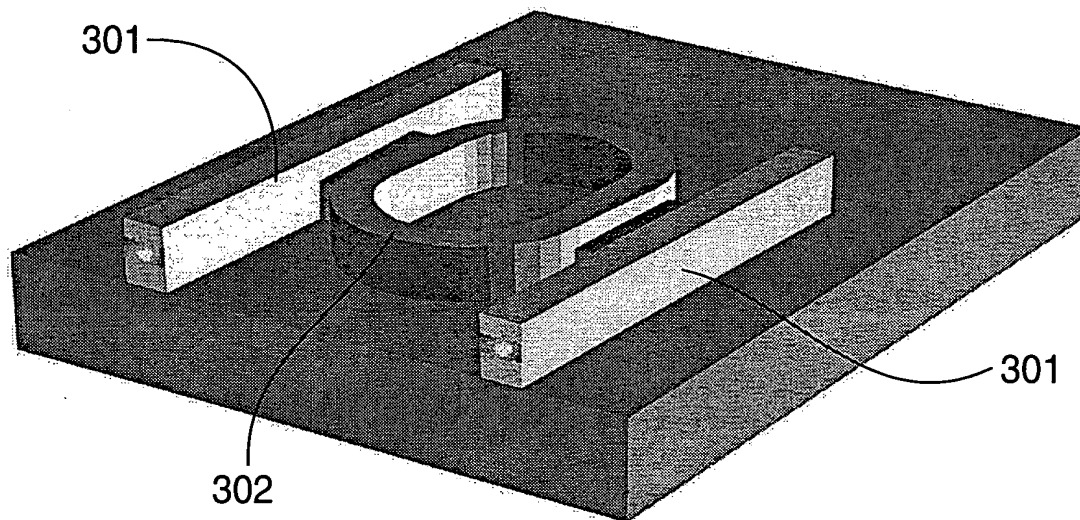


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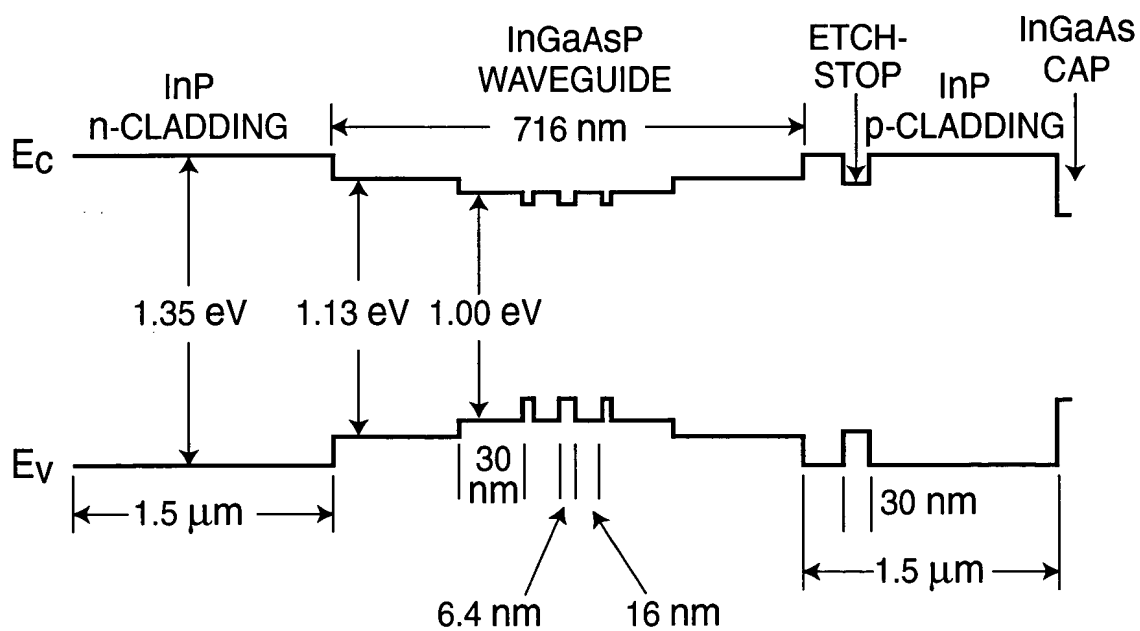


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SCHEMATIC DRAWING OF THE RACETRACK LASER.

FIG. 3

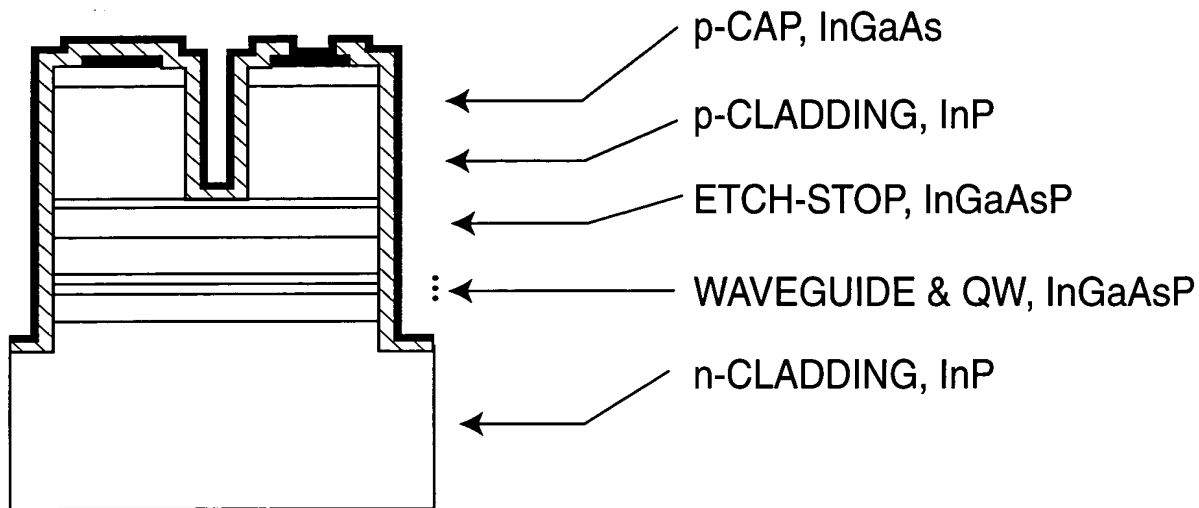


THE SCHEMATIC DRAWING OF THE EPITAXIAL STRUCTURE.

FIG. 4

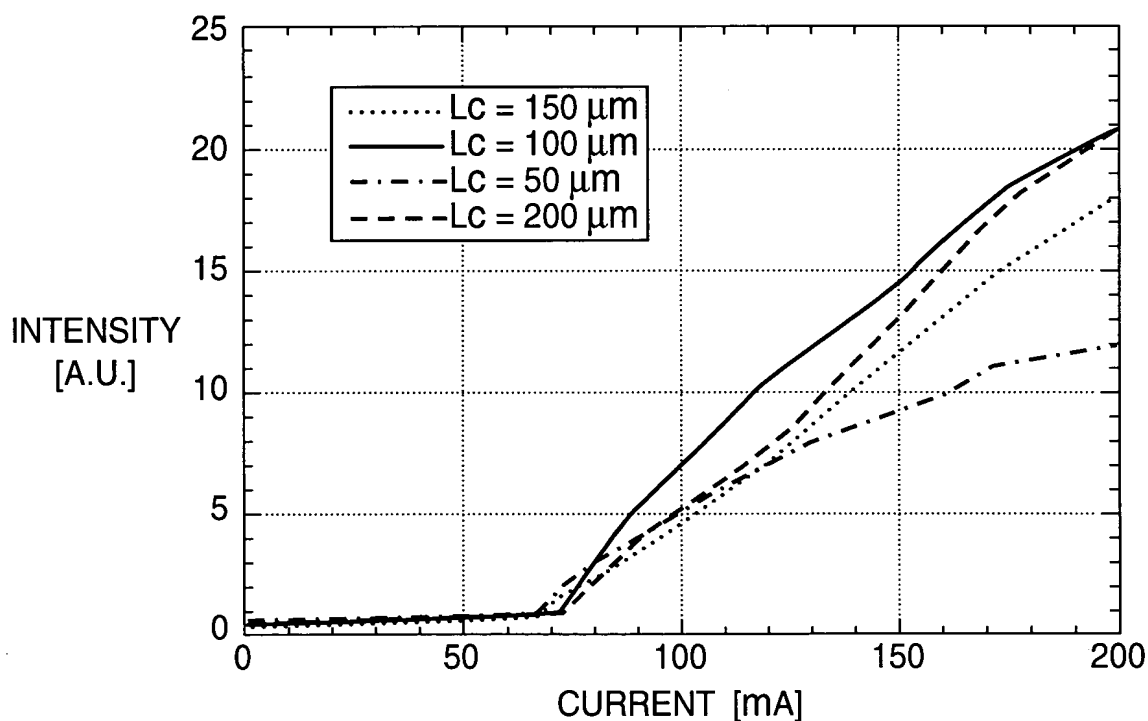


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A SCHEMATIC DIAGRAM OF THE WAFER VIEW SHOWN IN CROSS SECTION TAKEN FROM THE COUPLING REGION BETWEEN THE RING AND THE STRAIGHT SECTIONS.

FIG. 5

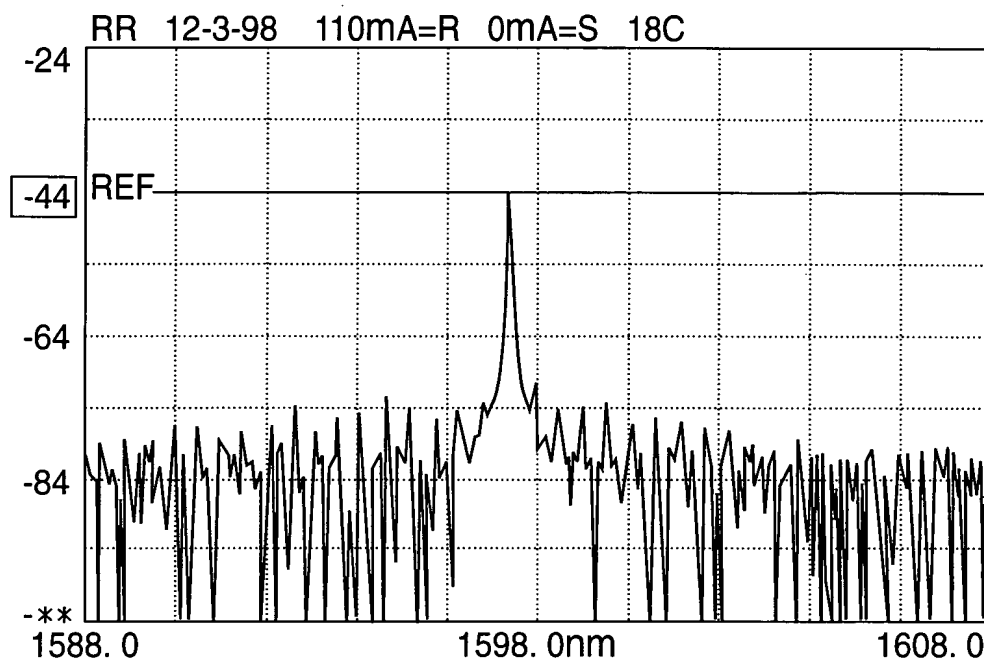


L-I CURVE FOR THE RACETRACK LASER WITH A COUPLING LENGTH RANGING FROM 50-200μm SHOWING NEARLY THE SAME THRESHOLD CURRENT FOR ALL CONFIGURATIONS, BUT WITH IMPROVED DIFFERENTIAL EFFICIENCY FOR THE 100μm COUPLER.

FIG. 6

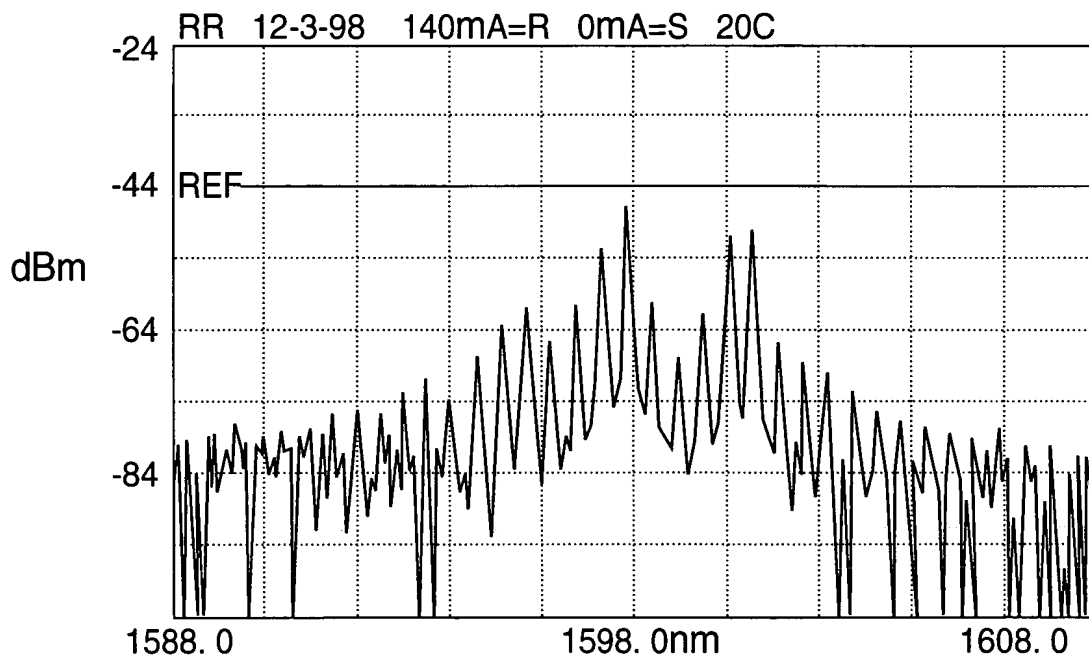


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LASING SPECTRUM OF THE RACETRACK LASER AT A DRIVE CURRENT I - 110 mA, SHOWING SINGLE MODE OPERATION WITH AN SMSR = 26 dB. SINGLE-MODE OPERATION IS MAINTAINED FROM THRESHOLD TO NEARLY $2 I_{th}$.

FIG. 7

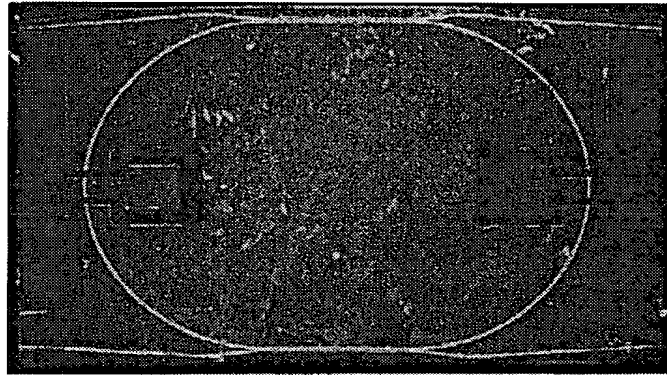


LASING SPECTRUM AT A DRIVE CURRENT I - 140 mA, AN ABRUPT TRANSITION FROM SINGLE-MODE (SEE FIG. 7) TO MULTI-MODE OPERATION, APPARENTLY DUE TO SELF-PULSATING.

FIG. 8

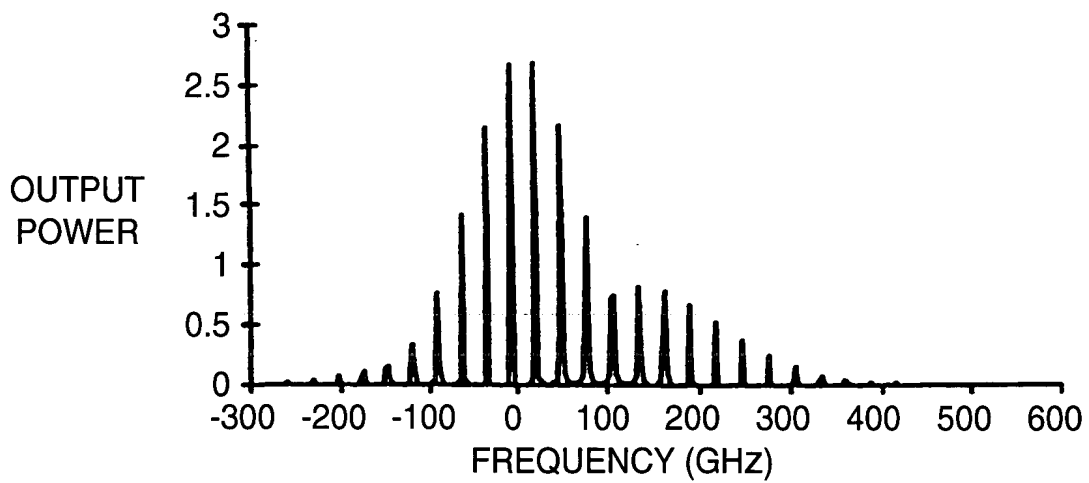


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DUAL-ABSORBER MODE-LOCKED RACETRACK LASER FABRICATED IN GaAlAs/GaAs.

FIG. 9



COMPUTED OUTPUT SPECTRUM OF A PASSIVELY MODE-LOCKED RACETRACK LASER.

FIG. 10